Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Permit Reviewer: Andrew True

GENERAL INFORMATION:

Source Name:	Cymetech Corporation
Mailing Address:	P.O. Box 859, Calvert City, Kentucky 42029
Date application received:	July 23, 2008
SIC/Source description:	2869, Industrial Organic Chemicals, Not Elsewhere Classified
Source ID #:	21-157-00061
Source A.I. #:	46167
Activity #:	APE20080001
Permit number:	F-05-050 R1

APPLICATION TYPE/PERMIT ACTIVITY:

[ ] Initial issuance	[ ] General permit
[X] Permit modification	[X] Conditional major
X Administrative	[ ] Title V
__Minor	[X] Synthetic minor
__Significant	[X] Operating
[ ] Permit renewal	[ ] Construction/operating

COMPLIANCE SUMMARY:

[ ] Source is out of compliance [ ] Compliance schedule included

[X] Compliance certification signed

APPLICABLE REQUIREMENTS LIST:

[ ] NSR	[X] NSPS	[X] SIP
[ ] PSD	[ ] NESHAPS	[ ] Other
[ ] Netted out of PSD/NSR	[ ] Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

[ ] Acid rain source

[ ] Source subject to 112(r)

[X] Source applied for federally enforceable emissions cap

[X] Source provided terms for alternative operating scenarios

[ ] Source subject to a MACT standard

[ ] Source requested case-by-case 112(g) or (j) determination

[ ] Application proposes new control technology

[X] Certified by responsible official

[ ] Diagrams or drawings included

[ ] Confidential business information (CBI) submitted in application

[ ] Pollution Prevention Measures

[ ] Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM/PM_{10}	0.35	3.54/3.73
SO_2	None	0.02
NOx	0.92	3.44
CO	0.05	2.89
VOC	0.14	1.59
Lead	None	0.000017
Individual HAP > 10 tpy	None	None
Total HAPs >25 tpy	N/A	N/A

Actual emissions are from the Kentucky Division for Air Quality's 2005 Emissions Inventory report.

ADMINISTRATIVE AMENDMENT F-05-050 R1:
An application for a name and ownership change was received by the Division for Air Quality on July 23, 2008 requesting a name change from Cymetech, LLC, to Cymetech Corporation. Permit F-05-050 was revised to F-05-050 R1, to reflect the name change.

SOURCE DESCRIPTION:

The purpose of the Dicyclopentadiene process is to extract high purity (>97%) Dicyclopentadiene (DCPD), from a crude stream containing 40-60% DCPD. Other commercial products can also be produced from this process, including the following:

- Methylcyclopentadiene Dimer
- Resin Former/Hydrocarbon Blend Stock
- Resin Oil Heavies
- Dicyclopentadiene Heavies

This process involves reducing all the contained DCPD to cyclopentadiene (CPD), distilling the CPD from the higher and lower molecular weight materials, then recombining the CPD under controlled conditions to yield a high purity DCPD product.

The primary components of this process are as follows:

- 3 Distillation Columns (CL-300, 301, and 302)
- Product Storage Tanks
- Heat Exchangers and Condensers
- Process Tanks
- Special Heat Exchangers (Dimerizers)

- Miscellaneous piping, valves, etc.
- Vacuum System
- Non-contact Cooling Tower

EMISSION AND OPERATING CAPS DESCRIPTION:

Marshall County is designated as attainment for all criteria pollutants. To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*, and 401 KAR 52:020, *Title V permits*, the following sourcewide emission limits shall apply:

a. Volatile organic compound (VOC) emissions: 90 tons per year;

b. Combined hazardous air pollutant (HAP) emissions: 22.5 tons per year; and

c. Single hazardous air pollutants (HAPs) emissions: 9 tons per year.

The permittee shall use a control device (flare) and limited feedstock processing in order to comply with the specified emission limits. Related enforceable monitoring, record keeping and reporting requirements are included in the permit. All other criteria pollutants will be emitted at a rate of less than 100 tons per year each. Compliance with the VOC limit shall make this source a synthetic minor source pursuant to 401 KAR 51:017, Prevention of significant deterioration of air quality. Compliance with these permit limits shall also make the requirements of 401 KAR 52:020, Title V permits, not applicable to this source.

OPERATIONAL FLEXIBILITY:

Compliance with 40 CFR 65 Subpart D, *Consolidated Federal Air Rule; Synthetic Organic Chemical Manufacturing Industry,* as an alternate to 40 CFR 60 Subpart NNN. This alternate operating scenario applies to EP T02 - Dicyclopentadiene Process Units.